

ABET Curriculum Vitae



1. Name: Ethar AL-Essa

Dr. Ethar M. Al-Essa is an Assistant Professor in the Department of Civil Engineering at Isra University, Jordan. She holds a Ph.D. in Civil Engineering, specializing in Natural Resources and Environment, from the University of Canterbury, New Zealand. She has academic and teaching experience in both Jordan and New Zealand. She served as **Head of the Civil Engineering Department at Isra University from 2023 to 2025**. Her research interests include **water and wastewater treatment, environmental engineering, adsorption, nanomaterials, and anaerobic digestion**. She has published numerous research papers in international peer-reviewed journals and is actively involved in research collaboration, academic service, and professional activities.

2. Email : ethar.essa@gmail.com, ethar.alessa@iu.edu.jo

3. Education:

- Ph.D. in Civil Engineering, Specialization in Natural Resources and Environment, University of Canterbury, New Zealand, 2020.
- M.Sc. in Civil Engineering, Specialization in Water Resources and Environment, Jordan University of Science and Technology, Jordan, 2009–2012.
- B.Sc. in Biosystems Engineering, Faculty of Engineering, Jordan University of Science and Technology, Jordan, 2002–2008.

4. Academic experience

- **September 19, 2023 – September 19, 2025**
Head of the Department of Civil Engineering, Isra University, Jordan.
- **2021 – Present**
Assistant Professor, Department of Civil Engineering, Isra University, Jordan.
- **2016 – 2020**
Teaching Assistant, Department of Civil Engineering, University of Canterbury, New Zealand.
- **September 2012 – January 2013**
Part-Time Lecturer, Department of Civil Engineering, Jordan University of Science and Technology, Jordan.
- **Summer Semester 2011/2012 and First Semester 2012/2013**
Part-Time Lecturer, Faculty of Engineering, Al al-Bayt University, Jordan.
- **2010 – 2012**
Teaching Assistant, Department of Civil Engineering, Jordan University of Science and Technology, Jordan.

5. Non-academic experience

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6. Certifications or professional registrations

- Certificate from the Ministry of Higher Education and Scientific Research – Academic Practice License, 2023

7. Current membership in professional organizations

- Engineering New Zealand

8. Honors and awards

- ICBWTP 2020 : XIV. International Conference on Biological Wastewater Treatment Processes certificate of best paper award: Al-Essa E., Bello Mendoza R. and Wareham D. (2020) The effect of magnetite particle size on methane production by fresh and degassed anaerobic sludge. International Journal of Environmental and Ecological Engineering 14 (2) 0000000091950263: 63-66.

9. Service activities (within and outside of the institution)

Dr. Ethar Al-Essa has actively contributed to the academic, administrative, professional, and community service activities of Isra University and the wider community. Her service activities include:

- Serving as **Head of the Civil Engineering Department** during the academic years 2023/2024 and 2024/2025.
- Participating in various **departmental and college committees**, including accreditation, curriculum development, e-learning integration, community service, training, and scientific research committees.
- Serving as a **member of the University Scientific Research Council** during the 2023/2024 academic year.
- Participating in the university's **"Dafa" community campaign**.
- Providing **academic advising and student support**, currently advising 20 students.
- Participating in the **Parents' Council at Independent International Schools** during the 2025/2026 academic year.
- Participating in meetings and activities of the **Jordanian Contractors Association**, contributing to professional and community service.
- Contributing to research collaboration and professional activities with researchers and institutions from Jordan and other Arab and international universities.

10. Most important publications and presentations from the past five years

#	Title	Authors	Volume / Issue	Journal	Year	Quartile (Scopus)
1	Acid-Activated Jordanian Kaolinite for Efficient Olive Mill Wastewater Treatment: Adsorption of Phenolic Compounds, Heavy Metal Removal, and Mechanistic Insights	Ethar M Al-Essa, Khansaa Al-Essa, Ghayah M Alsulaim, Suhad Aleassa	—	—	2026	Q1
2	Removal of hexavalent chromium from industrial wastewater using modified imperata cylindrica biosorbent and method validation	Khansaa Al-Essa, Mohamed A Habib, Ethar M Al-Essa	19	Arabian Journal of Chemistry	2026	Q1
3	Sol-gel synthesized MgO nanoparticles: Versatile applications in photocatalytic dye degradation, heavy metal removal, CO ₂ conversion, hydrogen production, and photoelectrochemical performance	Sara Aouadi, Mohammed Fouad Ferhat, Hocine Sadam Nesrat, Abderrhmane Bouafia, Salah Eddine Laouini, Ethar M Al-Essa, Mahmood MS Abdullah, Tomasz Trzepieciński, Hafidha Terea, Djamila Hamada Saoud, Abdelatif Aouadi	45(2)	Environmental Progress & Sustainable Energy	2026	Q1
4	Green remediation: Casuarina equisetifolia fruit-based activated carbon for pharmaceutical removal	Alaa M Al-Ma'abreh, Ethar M Al-Essa, Dareen A Hmedat, Gada Edris, Fida'F Odeh, Mariam Hamed	108(4)	Science Progress	2025	Q1
5	Removal of Total Phenolic Compounds and Heavy Metal Ions from Olive Mill Wastewater Using Sodium-Activated Jordanian Kaolinite	Ethar M Al-Essa, Khansaa Al-Essa, Neda Halalsheh, Abdelmajeed Adam Lagum, Alaa M Al-Ma'abreh, Hussein Saraireh, Khaldoun Shatnawi	17(10)	Sustainability	2025	Q1

#	Title	Authors	Volume / Issue	Journal	Year	Quartile (scopus)
6	Ciprofloxacin-loaded copper oxide nanoparticles: Cutting-edge multifunctional nano-therapeutics with superior antidiabetic, antioxidant, anti-inflammatory, and antibacterial ...	Ibtissam Laib, Abderrhmane Bouafia, Salah Eddine Laouini, Mahmood MS Abdullah, Hamad A Al-Lohedan, Ethar M Alessa, Johar Amin Ahmed Abdullah	653	Journal of Crystal Growth	2025	Q1
7	Graphitic Carbon Nitride/CeO ₂ Nanocomposite for Photocatalytic Degradation of Methyl Red	Khansaa Al-Essa, Ethar M Al-Essa, Alaa Qarqaz, Suhad Al-Issa, Solhe F Alshahateet, O'la Al-Fawares	17(2)	Water	2025	Q1
8	Interaction between magnetite and inoculum characteristics in accelerating methane production kinetics	Ethar M Al-Essa, Ricardo Bello-Mendoza, David G Wareham	16(9)	GCB Bioenergy	2024	Q1
9	Levofloxacin Adsorption onto MWCNTs/CoFe ₂ O ₄ Nanocomposites: Mechanism, and Modeling Using Non-Linear Kinetics and Isotherm Equations	Tariq J Al-Musawi, Yasir Qasim Almajidi, Ethar M Al-Essa, Rosario Mireya Romero-Parra, Enas R Alwaily, Nezamaddin Mengelizadeh, Fatemeh Ganji, Davoud Balarak	9(1)	Magnetochemistry	2022	Q2
10	Green synthesis of multifunctional MgO@AgO/Ag ₂ O nanocomposite for photocatalytic degradation of methylene blue and toluidine blue	Younes Zidane, Salah E Laouini, Abderrhmane Bouafia, Souhaila Meneceur, Mohammed L Tedjani, Sohad A Alshareef, Hanadi A Almukhlifi, Khansaa Al-Essa, Ethar M Al-Essa, Mohammed M Rahman, Osama Madkhali, Farid Menaa	10	Frontiers in Chemistry	2022	Q1

#	Title	Authors	Volume / Issue	Journal	Year	Quartile (scopus)
11	Application of magnetic activated carbon coated with CuS nanoparticles as a new adsorbent for the removal of tetracycline antibiotic from aqueous solutions (isotherm, kinetic and thermodynamic study)	Narjes Sadat Mazari Moghaddam, Behnam Barikbin, Ethar M Al-Essa, Rasoul Khosravi, Tariq Al-Musawi, Negin Nasseh	280	Desalination and Water Treatment	2022	Q3
12	Green Synthesis of NiO-SnO ₂ Nanocomposite and Effect of Calcination Temperature on Its Physicochemical Properties: Impact on the Photocatalytic Degradation ...	Sirajul Haq, Anum Sarfraz, Farid Mena, Nadia Shahzad, Salah Ud Din, Hanadi A Almukhlifi, Sohad A Alshareef, Ethar M. Al Essa, Muhammad Imran Shahzad	27(23)	Molecules	2022	Q1
13	A study on the ability of processed squeezed bitter almond for the removal of cadmium ions from contaminated water	Abdulaziz N Amro, Khansaa Al-Essa, Ethar M Al-Essa, Abbas IA Alakhras, Mohamed A Habib, Taleb Odeh	276	Desalination and Water Treatment	2022	Q3
14	Effective approach of activated Jordanian bentonite by sodium ions for total phenolic compounds removal from olive mill wastewater	Khansaa Al-Essa, Ethar M Al-Essa	2021/1	Journal of Chemistry	2021	Q2
15	The effect of magnetite particle size on methane production by fresh and degassed anaerobic sludge	E. Al-Essa, R. Bello-Mendoza, D. G. Wareham	14/2	Conference Paper (ICBWTP 2020)	2020	-----

11. Briefly list the most recent professional development activities

- **Continuing Education:**
 - Enrollment in formal courses, or workshops
- **Participation in professional organizations**
 - Attending local, regional, national, and international meetings, conferences and workshops sponsored by professional organizations
 - Presenting papers at conferences and workshops
 - Serving as an officer, board member, or committee member
- **Research**
 - Conducting research
 - Presenting findings of research to others
- **Improve job performance**
 - Keeping up with technology, systems, processes
 - Learning about new developments in my field
 - Improving existing skills
- **Increased duties and responsibilities**
 - Taking on new challenges in current position, projects, long or short-term assignments